Soc 316 Quantitative AnalysisSDA8
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SDA8: Multivariate Chi-square Tests of Significance (Chi-square Tests for Categorical IV, Categorical DV and Categorical CV)

This is an analysis of data from the 2022 General Social Survey (GSS). The GSS is a repeated cross-sectional study involving a survey of non-institutionalized U.S. adults ages 18 and older that measures various attitudes, opinions and behaviors. It has been conducted every other year since 1972, allowing social scientists to assess change over time in the values, beliefs, attitudes, opinions and behaviors of the U.S. adult population, specifically those related to social inequality, health and well-being, politics and law, family, religion, and key social issues such as technology, sustainability, capital punishment, abortion, voting rights, etc.

I will be dissecting data from the 2022 General Social Survey to conduct a series of Chi-square tests examining respondents' views on prayer in schools.

DV: PRAYER.

IV: RELPERSN

This is self-reported by the respondent, so it reflects their perception of their religiosity. That does not make this measure invalid in any way; this is the respondent's classification of themselves, it is not based on an objective set of criteria such as attendance at religious services, reading religious scripture, etc. In many ways a self-reported measure is preferred because how one perceives their religiosity likely affects their values, beliefs, behaviors, etc. more so than an objective or quantified classification! As with many social constructs, perception (in this case, relative assessment) often matters more than "reality"!

CV: The control variable is a measure of respondent's sex (male or female) - **SEX**. NOTE: this is a very crude (basic) measure of sex that is dichotomous. The researchers acknowledge that this does not encompass all possible categories for classifying individuals on the basis of their sex. Again, that does not make the measure invalid – it just means we cannot generalize these findings beyond the two groups represented.

The given data reads that more than one half of respondents (53.8%) are female. The majority of respondents (32.1%) are moderately religious, and a little more than half of respondents (51.5%) support the US Supreme Court decision to not require the reading of the lord's prayer or Bible verses in public schools.

DV = PRAYERIV = RELPERSN

Hypotheses for Bivariate Chi-square Test

H_a: Those who are not at all religious will be more likely than those who are moderately religious to approve of the U.S. Supreme Court ruling prohibiting state or local governments from requiring the reading of the Lord's Prayer or Bible verses in public schools.

H_0: There is no relationship between a person's religiosity and whether or not they approve of the U.S. Supreme Court ruling prohibiting state or local governments from requiring the reading of the Lord's Prayer or Bible verses in public schools.

This hypothesis is formed under the context of the concept that those who identify as moderately religious will want religious material taught in schools for the purpose of theological education. Non-religious people may not want theological education to be mandatory among public schools due to their own beliefs conflicting with it. Individuals identifying as moderately religious may also be more likely than nonreligious individuals to have children in order to conform with social as well as spiritual standards of religiosity; those with children would be more likely to care about theological education in public schools.

The United States Supreme Court has ruled that no state or local government may require the reading of the Lord's Prayer or Bible verses in public schools. What are your views on this--do you approve or disapprove of the court ruling? * To what extent do you consider yourself a religious person? Are you very religious, moderately religious, slightly religious, or not religious at all? Crosstabulation

Count

		To what extent do you consider yourself a religious person? Are you very religious, moderately religious, slightly religious, or not religious at all?				
		Very religious	Moderately religious	Slightly religious	Not religious at all	Total
The United States Supreme Court has ruled that no state or local government may require the reading of the Lord's Prayer or Bible verses in public schools. What are your views on this--do you approve or disapprove of the court ruling?	Approve	58	153	152	218	581
	Disapprove	124	246	110	69	549
Total		182	399	262	287	1130

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	128.896[a]	3	<.001
Likelihood Ratio	133.492	3	<.001
Linear-by-Linear Association	123.716	1	<.001
N of Valid Cases	1130		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 88.42.

We found support for the claim that there is a relationship between religious identification and approval or disapproval for the Supreme Court decision to not allow state or local governments the right to integrate required theological education into public school systems. Specifically, religious-identifying individuals are more likely than nonreligious individuals to disapprove of the Supreme Court's decision to not allow state or local governments to require theological education in public schools (56.93% and 24.04%, respectively).

Rerunning the Chi-square test, this time adding SEX as a control variable

The United States Supreme Court has ruled that no state or local government may require the reading of the Lord's Prayer or Bible verses in public schools. What are your views on this--do you approve or disapprove of the court ruling? * To what extent do you consider yourself a religious person? Are you very religious, moderately religious, slightly religious, or not religious at all? * CODE RESPONDENT'S SEX Crosstabulation

Count

CODE RESPONDENT'S SEX			To what extent do you consider yourself a religious person? Are you very religious, moderately religious, slightly religious, or not religious at all?				
			Very religious	Moderately religious	Slightly religious	Not religious at all	Total
Male	The United States Supreme Court has ruled that no state or local government may require the reading of the Lord's Prayer or Bible verses in public schools. What are your views on this--do you approve or disapprove of the court ruling?	Approve	31	70	79	107	287
		Disapprove	52	101	54	37	244
		Total	83	171	133	144	531
Female	The United States Supreme Court has ruled that no state or local government may require the reading of the Lord's Prayer or Bible verses in public schools. What are your views on this--do you approve or disapprove of the court ruling?	Approve	27	83	73	111	294
		Disapprove	72	145	55	32	304
		Total	99	228	128	143	598
Total	The United States Supreme Court has ruled that no state or local government may require the reading of the Lord's Prayer or Bible verses in public schools. What are your views on this--do you approve or disapprove of the court ruling?	Approve	58	153	152	218	581
		Disapprove	124	246	109	69	548
		Total	182	399	261	287	1129

Chi-Square Tests

CODE RESPONDENT'S SEX		Value	df	Asymptotic Significance (2-sided)
Male	Pearson Chi-Square	46.483[b]	3	<.001
	Likelihood Ratio	47.777	3	<.001
	Linear-by-Linear Association	43.827	1	<.001
	N of Valid Cases	531		
Female	Pearson Chi-Square	83.345[c]	3	<.001
	Likelihood Ratio	86.860	3	<.001
	Linear-by-Linear Association	80.758	1	<.001
	N of Valid Cases	598		
Total	Pearson Chi-Square	129.196[a]	3	<.001
	Likelihood Ratio	133.788	3	<.001
	Linear-by-Linear Association	124.017	1	<.001
	N of Valid Cases	1129		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 88.34.

b. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 38.14.

c. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 48.67.